

The First World War and the Emergence of National Markets in Canada

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FIRST DRAFT

ABSTRACT: The First World War caused major disruptions for the Canadian economy in terms of factor mobility and diversion of resources. European immigration and British capital imports stopped, and over a quarter of military-aged men served in the armed forces. The war appears to have had long-term effects on regional wage and price structures within Canada, and relative to the northern U.S. This paper uses federal government records listing expenditures across the country by the armed forces to study changes in supply patterns and prices by region over 1912-19. Production and distribution networks within Canada underwent substantial transformation as a result of wartime demand.

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The First World War was extremely divisive within Canadian society. The issue of conscription split the country, resulting in decades of bitterness for those on both sides of the debate. In economic terms, the First World War was a big war for Canada. Over 25% of Canadian men of military age served in the armed forces, and roughly 10% of those mobilized died. By contrast, in the U.S., only about 17% served, and less than 3% of those mobilized died (Brown and Cook, 1976; Winter, 2003, p. 75). The role of the government in the economy increased dramatically over the course of the war. Canadian federal government expenditures, which were not quite 2% of GDP in 1913, rose to almost 8% of GDP in 1918 (Urquhart, 1993, p. 14).

Given the greater, and longer, disruption to the Canadian labour market, we expect the effects of the war on the Canadian home front to have been larger than those seen in the U.S. In addition to creating labour scarcity across the country, the war likely reduced regional growth differentials within Canada. By shutting off immigration from Europe, the extraordinary population growth rates of western Canada in the immediate pre-war years were greatly reduced. Across the country, there was a strong stimulus to increase food production for export, while manufacturing expanded mainly in central Canada.

Recent analyses of regional price patterns suggest that despite the upheavals, the First World War coincided with the emergence of “national markets” in Canada. While the political impact of the war created or increased some social divisions, certain visible economic distinctions greatly diminished. Prior to 1914, Canadians living in western Canada paid much higher prices for almost all consumer items than did those in central and eastern parts of the country (Emery and Levitt, 2002, Minns and MacKinnon, 2004). Even within the long settled

provinces, there were substantial price gaps, and all were far greater than can be explained by transportation costs. By the 1920s, the west / east split in prices and nominal wages had largely disappeared.

Before the war, inter-regional price spreads across Canadian cities were substantially larger than across northern US cities close to the Canadian border. Table 1 shows relative prices for a few food items in Vancouver and Toronto and for similar items in Seattle and Buffalo. In both 1900 and 1913, Vancouver prices were generally higher relative to Toronto than was the case for the American pair. These results show up across a wide range of goods and pairs of cities. By the early 1920s, it is no longer clear that price gaps were greater in Canada, and for many goods, prices were about the same across Canada. Emery and Levitt (2002) show coefficients of variation for inter-urban retail price indices (for food, rent, and fuel and light) dropping to less than half their pre-war level during the war, and then a fairly stable pattern persisting through the 1920s and 1930s. Using a completely different set of price records (expenditures by federal penitentiaries), we find a similar pattern of a rapid decline in regional variation within Canada during the war (Minns and MacKinnon, 2004). The Canadian data shown in Table 1 (a fragment of the data Emery and Levitt used) are consistent with the general finding. The lower panel of Table 1, and other preliminary examinations of U.S. retail price data, suggest that if the war reduced price variation within the northern U.S., the effects were smaller and temporary.

This paper attempts to explain why regional food price differentials declined in Canada during the war, and why the changes that took place were not reversed in the 1920s. All sources agree that there was considerable inflation during and just after the war, with prices something

like doubling between 1913 and the summer of 1920, and rapid deflation thereafter. The thinner set of sources providing prices for a range of goods by region indicate that prices rose less in the west than in central and eastern Canada. We are not concerned here with refining measurements of overall inflation, but rather with considering how supply patterns changed and why these changes were concentrated during the war period.¹

Table 1, and estimates of coefficients of variation for consumer price indices at the city (or prison) level, suggest that there was some price convergence between western and central Canada before 1914. One interpretation of what we see happening from 1913 to 1920 is that the processes leading towards price convergence were already well-established and continued to take place more or less independently of the war, but the effects on prices were more noticeable in the later years because a higher proportion of goods were being handled in the “new” ways. The other view is that the war was a substantial shock that considerably hastened major, and largely irreversible, changes in food processing industries and in the wholesaling and retailing sectors. If so, we see price spreads dropping because of war-induced phenomena.

Ideally, we would look directly at the activities of retail stores to try to work out how and why the prices they charged changed. Given the small size of most stores of this period, we would have to locate extremely detailed records for many retail establishments to make progress – this seems highly unlikely.² Instead, we concentrate on a readily available, but previously

¹ Minns and MacKinnon (2004) uses prison prices to construct a regionally-disaggregated consumer price index. Some of the issues we are trying to further explore in the context of our work on prison prices are changes in retail/wholesale markups during the war, and changes in the grades of goods available to wartime consumers.

² In 1918, food dealers of all types were required to obtain licenses from the Canada Food Board. Over 49,000 licenses were issued to retail grocers and “general retailers” (including

unused quantitative source: expenditures by the Canadian army.³ We know that the army was not a typical purchaser. However, we suspect that the enormous growth of the military between 1913 and 1918 either induced changes in both the way the army was supplied, and how retailers were supplied, or at least that innovations in army supply were also occurring for retailers. There were military camps and regional headquarters across the country (generally one district per province, but with three in Ontario and two in Quebec). While the purchase of uniforms was centralized, it appears that each district had considerable freedom in choosing its own food and hardware suppliers.⁴ Presumably there was some oversight from headquarters in Ottawa, and it is likely that neighbouring districts shared information about the quality of goods and timeliness of shipments.

We have also begun to make use of a weekly trade publication, *The Canadian Grocer*, to get a sense of how retailers were affected by the war.⁵ Some of the important developments discussed by *The Canadian Grocer* are not directly visible in the army expenditure records, but what we can observe from spending patterns is consistent with these innovations. We have in the

butchers, bakers and so on). Canada Food Board (1919), P. 39

³Like the penitentiary expenditures, military purchases of \$50 or more were separately enumerated in the Annual Report of the Auditor General, published in Sessional Papers of the Canadian Parliament. Wartime expenditures were grouped together in section ZZ. We have used only the records of the “Department of Militia and Defence” (this does not include the naval service.)

⁴ There would have been considerable uncertainty within each military district about how many troops (and horses) would need to be fed, and for how many months in the year. This likely would have discouraged heavy reliance on annual contracts. Once Canadian troops went overseas, we do not see expenditures on their maintenance.

⁵We initially thought that the *CG* would discuss questions related to supplying the army. So far, however, we have found little on this topic.

military records expenditures for an extremely diverse set of goods. We concentrate on food both because there are usually several purchases of each item in each military district every year, and because we have access to *The Canadian Grocer*.⁶

Supplying the Western Canadian Market

Almost everything cost more in western than in central Canada prior to 1914, probably because costs were higher, possibly also because of lack of competition. Given very rapid population growth in the years up to 1914, demand could have outstripped local supply for perishables such as bread and milk. Towns were almost always located along a railway line, so the basic transportation infrastructure was in place. However, the costs of supplying fairly small amounts of various goods could have been high, and the number of sellers very low.

Mechanisms tending to even out costs across the country existed well before 1914: most obviously mail-order firms such as Eaton's (based in Toronto) conducted a brisk business in the west.⁷ However, the typical urban consumer almost certainly purchased most supplies from small retail stores. While some food was produced locally, or imported via Vancouver, much was shipped from central Canada, especially packaged or canned goods.

There were several layers to the distribution network. We think of producers selling to wholesalers and wholesalers to retailers as the typical pattern, but for many products, there was a fourth layer: brokers or agents. Without a broker or agent, an eastern manufacturer (say of cookies or jam) could try to create demand for its products by appealing directly to the public via

⁶ We have not yet begun to read through *Hardware and Metal* or *The Dry Goods Review*, which were also published by Maclean's publishing in Toronto.

⁷For a brief overview of the late nineteenth century development of retailing and wholesaling in Canada, see Bliss (1987) pp. 288-292.

advertising in newspapers and magazines. Alternatively or in addition, it could employ commercial travellers to visit retailers to convince them of the fine qualities of the product in question. The retailers would generally order from a wholesaler, as they were unlikely to be purchasing in car-load or other similarly large quantities, and manufacturers were often unwilling or unable to ship small quantities. The commercial travellers could also visit wholesalers, again to talk up their line of goods. Keeping commercial travellers at work in western Canada was clearly expensive: there were many small towns, widely separated. Presumably smaller firms had few or no travellers. For both large and small eastern firms, therefore, we expect the cost of getting goods to the retailer, and then to the consumer, in Regina was higher than in Hamilton or Ottawa, quite apart from the extra cost of shipping carload lots an extra thousand or more miles .

By the early 1900s, a network of “manufacturers’ agents” was developing.⁸ An agent could represent multiple firms. A commercial traveller working for an agent would therefore push a range of products to retailers or wholesalers. The agent would also work on sorting out transportation difficulties. The agent could warehouse and trans-ship goods and usually sent them on to wholesalers rather than directly to retailers.⁹ What was the dividing line between an agent and a wholesaler? The answer was twofold (although likely increasingly blurred over time). The agent typically never owned the goods: he helped the seller and the buyer make their transaction. Thus retailers and especially wholesalers could ask an agent for help in identifying a

⁸ There were also “grocers’ brokers”. Often these two functions were combined, with firms advertising themselves as “manufacturers’ agents and grocers’ brokers.” Brokers dealt with less processed commodities, such as spices or flour or dried fruit, while agents dealt with manufactured items. We simplify by referring to both brokers and agents as agents.

⁹“The why of the Grocery Broker,” *CG*, Oct. 29, 1915, p. 118, “How Grocery Brokers Serve the Trade,” *CG*, Aug. 24, 1917, pp. 28-9.

supplier, and the agent worked with the producer to deliver the goods. An agent handled a limited range of non-competing lines: an agent might represent 20 or 30 firms (at most a few hundred specific items) while a typical wholesaler stocked the whole range of products that a retailer might buy. If an agent visited a retailer, he would normally be expected to route the order through a local wholesaler. Clearly, the functions of agent and wholesaler overlapped, and some agents appear to have become wholesalers. The spread in the use of agents tended to break down whatever local monopolies may have initially existed for wholesalers: if a retailer believed that it was too expensive to purchase good X from wholesaler Y, he could ask the agent to find a cheaper way to supply the good.

While the largest eastern manufacturing firms could afford to have their own travellers at work in western Canada, the rise of the manufacturing agent allowed smaller firms some representation in the west. The use of agents was not restricted to small firms: in 1913, one Winnipeg agency represented the Borden Milk Co. and Proctor & Gamble, as well as a firm from Brantford (Ont.) selling honey, and a Norwegian firm selling sardines. By the time the war broke out, the larger agencies had offices in several western cities. It is not clear whether agents were used less in central and eastern Canada, or whether the eastern firms were longer established and simply felt less need to advertise.¹⁰ In any case, there were far more ads in the *CG* from the western firms. In 1913, 11 western agents placed a joint ad calling on the “manufacturers of Great Britain, of the United States and of Eastern Canada”, pointing out that

¹⁰The 1899/1900 Union Publishing Co. *Classified Business Directory* lists many “commission agents”, “commission merchants” and various kinds of brokers in the larger Ontario and Quebec cities. How many of these were working to supply food for consumption in Canada is unclear.

“Western Canada is an expensive territory to cover....Yet the expense of these long trips can be offset. Many Commission Merchants and Manufacturers’ Agents have systematized this field. They reach the wholesaler and the retailer. They go to the large centre and to the new towns. ... The Manufacturers’ Agents stock goods so that prompt service may be given retail detailers. They undertake to introduce new lines.”
(*CG*, April 18, 1913, p. 180)

The retail stores of the pre-war era provided many services which could, in principle, be shifted down to the consumer or up to the wholesaler or producer. A wide range of products came to the grocer in bulk and were measured out and wrapped on the premises. Readers of the *CG* were urged to buy cheese cutters, bacon slicers, and automatic scales so that customers could be served more efficiently and accurately. Many to most urban grocers provided home delivery, and both rural and urban grocers usually provided credit (which required substantial record keeping). As the western provinces were the high wage provinces, even if the cost of tea, sugar, coal oil, or biscuits had been the same to a western as to an eastern retailer, and the stores served the same number of customers, we would expect the price to the consumer to have been somewhat higher in the west.¹¹

The War and Canadian food sellers

From 1914 to 1920, Canadian producers could readily sell all they could make. From 1915, the Imperial government purchased as much as it could for use in Britain, and to a lesser

¹¹ There were few chain grocery stores in Canada prior to 1914, and almost all of these were in southern Ontario. The big meat-packing firms (especially Wm. Davies and Pat Burns) established chain meat and provisions stores starting around 1900 (MacLachlan, 2001, 297-8). Chain did not mean self-service. Self-service cash and carry chain “groceries” began to be established in the early 1920s. Huston (1929, p. 322) claimed that in 1929, for Canada as a whole the chain (presumably lower priced) grocery stores were handling about 10% of all business, but roughly 25% of business in Ontario. Concentration of the 1920s retailing revolution in Ontario could have brought back some regional price gaps.

extent there were sales to France and Russia. Canadian firms had considerable difficulty learning how to make shells and rifles: they already knew how to produce items such as bacon, butter, cheese, canned fruits and vegetables.

By no European standard could Canada have been said to have food shortages. Some items were scarce or unavailable, but there was never any question of inadequate availability of calories, or even of major food groups. Canada had a “food controller” from June 1917: by early 1918 his duties were taken over by the new Canada Food Board. The main aims seem to have been to discourage consumption of exportable items, as well as minimize civilian discontent about rising food costs. There was considerable talk about price controls, and some attempts to limit price increases for obvious staple items such as bread and sugar. Approximately 70 orders were issued in the last year of the war. All food dealers had to obtain licenses. Attempts at food and fuel price control in Canada in 1917 and 1918 put the main emphasis on voluntary restraint and improving transportation for key foodstuffs. In 1917, as in the U.S., the government intervened in the wheat market, setting a purchase price for the entire harvest (Sharp, 1940, p. 382). For products that could be exported from Canada, there were negotiations to set export prices, as these would have an impact on domestic prices. Where Canadian firms needed a license to export, licenses were not to be issued until all Canadian orders had been filled (Canada Food Board, 1919, p. 46). The International Sugar Commission in New York had a British representative, who was advised by a Canadian representative of the Food Board (Canada Food Board, 1919, p. 11).

From at least mid-1916 onwards to late 1920 there was much agitation in the press about the ways “middlemen” raised prices, and the Canada Food Board and the Board of Commerce

(which we think takes over the functions of the CFB after the war) held inquiries into allegations of uncompetitive behaviour. Speculators were alleged to drive up prices by creating artificial shortages. The *CG* frequently pointed out that attempts to escape from the clutches of the supposed price-gougers may have created more waste: for example baking bread at home. The Canada Food Board tried to limit sales of packaged products (such as cereals), on the grounds that the packaging and advertising raised prices. The *CG* responded by noting that few families could use 20-30 pound bags of rolled oats or cornflakes. Firms (such as Quaker Oats) could be (and were) exempted from this regulation, and they routinely advertised the fact that their packages were licensed.

While we wish to pursue the question of how much prices were affected by the actions of the Canada Food Board, and limitations on imports of food from the United States imposed by the similar agency in the U.S., our strong impression is that in Canada there was far more talk than action.¹² Only a few hundred offenders were punished in any way (mostly by a fine, sometimes by a suspension of a license) (CFB, 1919, p. 61). Our conclusion is in line with post-Second World War suggestions that far more effective regulation was undertaken from 1939 on (Taylor, 1947).

Even if we are missing effects of wartime price controls which could have resulted in limiting inflation more in the originally highest price regions, it would be hard to argue that a short period of controls had a long-term effect. The wartime shift in regional price patterns was not a temporary development.

¹² The CFB claimed that food price increases in Canada to the end of 1918 were well below those seen in the U.S. This is a point we wish to verify.

In Canada, as in the U.S., the railway system was in a state of flux during the war. Freight rates were held down until early 1918. The two new transcontinental railways (completed only in 1915) were bankrupt by 1917 and then (in stages) taken over by the federal government. Canada had a tremendous number of miles of track, but there were shortages of equipment. While the cost of shipping goods to the west was falling in terms of 1914 cents per mile travelled, many other difficulties and delays were adding to the total costs of shipping.

As shipping became more difficult, agents, especially in the west, presumably became more important. If it was getting harder for manufacturers to find commercial travellers because many were joining the army, turning the work over to agents again made sense. It seems there was also a shift towards more advertising in newspapers and popular magazines: ads in the *CG* frequently noted the desirability of stocking an item because customers would be seeing ads for it.¹³ It seems highly probable that there were considerable economies of scale associated with using an agent, so the costs of distributing goods in the west relative to the east should have been falling. During the war, several of the western agencies expanded the number of cities in which they had offices. From 1916 to 1918, the *CG* published a summary listing of the agents for the firms advertising in their spring and fall special issues. In October, 1916, only 79 firms inserting an ad for their products were recorded as having one or more agents. By April, 1918, the number

¹³ The expansion in the use of newspaper ads in the 1920s is well-known. We would like to examine newspapers during the war to see how much of an increase in food advertising occurred at this time. If a manufacturer launched a nationwide advertising campaign mentioning prices, it may have been difficult / impossible to advertise different prices in different regions. Working through *Maclean's Magazine*, for example, would give us a sense of how often prices are mentioned in ads directed to the retail market, and whether this changes substantially over the course of the war.

had risen above 400.¹⁴

Labour scarcity hit the grocer as well as the wholesaler / manufacturer. The characteristics of the commercial traveller / grocery clerk in English-speaking Canada overlap heavily with the characteristics of men likely to volunteer for (or later on be drafted into) the military. As they had to speak good English, they were likely either British or Canadian born of British origin. They were not working in agriculture, and were not working in what were considered to be vital war industries. Some forms of economising on scarce labour passed work on to the consumer (most obviously curtailing or eliminating delivery). To some extent grocers were able to substitute less skilled labour (including young women employees) and more capital as they lost experienced workers. Labour saving devices were already coming into use before the war: they are explicitly advertised as labour saving in the later years of the war, not advertised like that in 1913.¹⁵ These kinds of war induced changes could have affected retail / wholesale markups, but presumably would have had only a modest differential impact on prices in western

¹⁴ The total number of ads in the special spring and fall issues was about the same each year. It is possible that with the addition of the “who is agent for?” listing that advertisers were more likely to list the name of the agent in their ad. However, it also seems probable that more advertisers were putting in the name of the agent because they expected retailers and wholesalers to contact the agent rather than the firm itself, or wait for a commercial traveller to call. Sample listings from “who is agent for?” read “C.H. Catelli Co. Ltd., Montreal – Tees & Persse, Winnipeg” (the product was macaroni), “California Products Co., San Francisco – Canned Goods – H.P. Pennock & Co. Ltd. Winnipeg”, and “Furuya & Nishimura, Montreal – Japan Tea, etc. – R.F. Cream & Co. Ltd., Quebec, P.Q., The C.H. Grant Co. Winnipeg.” (This firm had two agents, one in central Canada and the second in the west.) We assume that where only a western agent was listed, firms in central and eastern Canada were expected to approach the manufacturer directly or work with their wholesaler.

¹⁵ For example, the ad (Oct. 26, 1917, p. 37) by Walker Bin and Store Fixture company “Meeting the Man Famine” and (p. 38) “solve the labour shortage problem by installing the Barr Account Register,” and the article (p. 101) “Making Equipment do the work of men.”

and eastern Canada.

The third way of responding to labour scarcity shifted where some food processing took place. Rather than purchasing bulk quantities of items such as tea or cereals, which needed careful storage and then had to be weighed and wrapped, grocers could stock a higher proportion of packaged goods.¹⁶ These are easier to store, don't need weighing and wrapping, and consumers can read ads about the product rather than talk to clerks to find out about the product's fine qualities. Most food manufacturing was concentrated in (lower wage) central Canada.

We have then three possible effects of wartime labour shortages that should have tended to bring western and eastern prices into line: greater reliance on manufacturers' agents allowing for more contact between retailer and manufacturer, greater reliance on national consumer advertising, and greater use of packaged goods. So long as these innovations were judged mainly successful, they would not have been abandoned after the war ended.

The Army as Consumer

¹⁶ Up to the end of 1919, the *Labour Gazette's* survey of retail prices covered 40 food items, 4 in cans. The delivered milk was probably in a quart bottle. All other items were listed as being sold either in large quantities (potatoes by the 90 lb. bag), or were almost certainly kept in bulk by the storekeeper then measured out by butcher or grocer and wrapped by them (*LG* Nov. 1919, p. 1346). Starting in February, 1920 (*LG* March, 1920, pp. 348-355), a total of 94 food items were surveyed, with 21 (plus milk) listed as being sold by the can, tin, packet, or stated size of bag as if likely pre-packaged (flour in 24 lb. bags). The new list broadened the range of sub-types of items previously included (21 rather than 3 kinds of fish) and also added new foods – oleomargarine (which was only sold in Canada because of butter shortages), soda biscuits, jams, canned fruit, marmalade, corn syrup, honey, cocoa, cream of tartar, and baking soda. The *LG* had no consumption survey on which to base its revised list: presumably civil servants felt that the added items were routinely purchased by typical Canadian consumers. Possibly even by 1914 the *LG* food listing was out-of-date. The doubling in the proportion of packaged items in the survey just after the war does, however, fit with the story about the evolution of retailing we think we see in wartime issues of *CG*.

Up to 1914, Canada had very few troops. There were small numbers of men in the permanent forces, more in the militia.¹⁷ Some of the men in the militia attended military camps for a few weeks in the summer while others trained at local headquarters. At the outbreak of the war, perhaps 1,800 of these soldiers had any experience with providing transport and supplies (Warren, p.76).

Numbers of troops and needs for housing, clothing, and feeding in both winter and summer increased dramatically starting in August 1914. We have found only scattered estimates for troop numbers in Canada. Troops received their initial training in Canada and were then sent to Britain. Some soldiers were kept in Canada for home defence, or to help with recruiting and training. At the beginning of February, 1916, approximately 80,000 troops were being mobilized in Canada. (At least another 118,000 had already sailed for Britain.¹⁸) At the end of the war, some 40,000 troops were in Canada (*Canadian Military Gazette*, Nov. 26, 1918, p. 6). Given that the army was feeding active young men, and that many civilians lived on farms where only a minority of food consumed was purchased, military purchases were likely roughly 1-2 % of Canadian consumption per year.

When the roughly 30,000 men who would become the First Contingent of the Canadian Expeditionary Force were training at Valcartier (the new military camp near Quebec City) in the early autumn of 1914, the ration scale was intended to provide a healthy, if reasonably limited,

¹⁷On March 31, 1914, there were 3,000 officers and men in the Permanent Force; about 57,000 "trained" in the Active Militia during 1913 (Report of the Militia Council for the Dominion of Canada for the Fiscal Year ending March 31, 1914. SP No. 35, 1915, pp. 27, 45.)

¹⁸"Memorandum No. 2 Respecting Work of the Department of Militia and Defence: European War 1914-15 from February 1st, 1915 to January 31st, 1916" (SP No. 231, 1916, p. 7, for numbers 1915-16, plus number in first contingent of CEF from Morton, 1993, p. 20)

range of foods (Table 2). As conditions settled down, standard rations expanded to include tea, coffee, and milk powder. We see a broader range of food items purchased, although those listed in Table 2 were the main supplies. An Army Service Corps Supply Depot was established near every military barracks or camp. Supplies were delivered to the depots, which presumably built up substantial stocks of less-perishable items. In some places the CASC baked bread, and presumably everywhere it transformed animal carcasses into more readily usable cuts of meat. The CASC handled the daily distribution to the military units (Warren, 1961, pp. 74-76).

It appears that the CASC in each military district largely controlled the contracting. So far, we have been unable to find details on how suppliers were selected.¹⁹ While we expect there was political and personal influence in the awarding of contracts, we do not see reasons for such influences to have been more important in some regions than others. Before the war, retail and wholesale grocers near each militia camp should have been readily able to supply the consumer items needed by (at most) a few thousand men for a few weeks. With rapid and extensive mobilization from August 1914, these regular sources may have been overwhelmed, particularly in the more outlying parts of the country. We do not know to what extent suppliers submitted tenders, or how much information the decision makers in the army had about potential suppliers. It is possible that the army used grocery brokers and manufacturers' agents to help them find suppliers, but we cannot trace this through the available records. We do, however, see the outcomes.

The Auditor General's reports show, for each supplying firm by military district,

¹⁹ The Naval Service placed ads calling for tenders for supplies in the *CG*, but we have not found any from the army.

quantities purchased of each item, and the sale price.²⁰ The records are for fiscal years, which ran from April 1 to March 31. With the rapid inflation of the later war years it is impossible to distinguish seasonal variation in prices from general inflation. Sometimes the exact purchase (e.g. “strawberry jam”, “granulated sugar,” “halibut”, “cabbages”) is recorded, but often we are told only “jam”, “sugar”, “fish”, or “vegetables”.

Table 3 shows that army prices, by region, moved roughly in line with reported retail and prison prices. All three sources show Montreal as a fairly high priced eastern city before the war, but with prices for each good almost always highest in British Columbia.²¹ The military districts shown cover south-central Ontario, western Quebec, and British Columbia. By the last year of the war, most goods cost a lot more, but with British Columbia prices rarely much above those in central Canada.

Army Food Suppliers

Who sold food to the Canadian army? The answer changes a lot over the course of the war. We cannot yet say to what extent the army was intentionally changing its purchasing patterns, and to what extent it was simply responding to new opportunities and limitations.

Total expenditures on food rose from about 1.7 to about 7.5 million dollars between the

²⁰For example, in 1917/18 the firm of F.O. Diamond in Belleville, Ontario, sold beans, prunes, sugar, and cheese, to the 3rd Military District (eastern Ontario). E.D. Smith & Co., the jam company based in Winona, Ontario, has 11 sales of jam (totalling 67,890 pounds) to the 4th Military District (western Quebec) at prices ranging from 11 to 17 cents per pound. Alf Dombrowski of Quebec sold bacon, beef, and corned beef to the 5th Military District (eastern Quebec). Swift Canadian Co. of Toronto sold beef, bacon, and butter to the 1st Military District (southwestern Ontario) (and to most other districts as well).

²¹ We combined 1912-13 and 1913-14 observations because there were few purchases (and little general price increase). Most price observations are likely for the summer months, as this was when militia camps were held.

first and last war year: prices rose a lot, but so did quantities of food consumed. In 1918-19, there were more men to feed, and likely more in each month, even from December 1918 to March 1919. Very little would have been spent in March-July 1914.

In both 1914/15 and 1918/19, most of the biggest food suppliers (Table 4) were selling meat and dairy products. The army always bought a lot of meat, and meat was relatively expensive per pound, so it is no surprise that big suppliers of meat were selling the most. The modernization of meat packing in Canada substantially lagged developments in the U.S. Only around 1900 did large-scale firms emerge. By the time the war broke out, the biggest firms had built or bought packing plants in several Canadian cities (MacLachlan, 2001, pp. 123-160, MacEwan, 1979, pp. 99-107, Bliss, 1978). By the late 1920s, Harris Abattoirs, William Davies, and Gunns were “Canada Packers.” With Swift Canadian and Pat Burns they were the three main meat packing firms in the country.²²

The dominance of the meat packing firms in the top-10 list is much clearer in 1918/19 than in 1914/15: we do not yet know if it was just in supplying the army that these big firms were consolidating their position within the country. The political connections of Joseph Flavelle may have helped him obtain army contracts in 1914/15, but in any case Harris Abattoir was a fast-growing company. The meat contracts for the Canadian army were a small fraction of the meat exports made possible by the war, and the expansion of meat-packing firms during the war is usually described as a response to export opportunities, not to domestic conditions.²³

²² Gordon, Ironside & Fares was also absorbed into Canada Packers (McCullough, 2001, p.23).

²³ In 1918, over \$50 million worth of meat was exported. Canada Food Board (1919), p.7.

Several of the firms in the 1914/15 "top 10" sank dramatically in importance as army suppliers by 1918/19. They didn't just drop out of the top 10, they dropped below the top 100, or even disappeared from the military purchase lists entirely.²⁴ If political patronage helped in securing contracts early in the war, these firms did not continue in favour, despite the constancy in the political regime in Ottawa. Firms that replaced them in the top 10 list were not always suppliers at the beginning of the war. Three firms on the top-10 list in 1918-19 (Matthews-Blackwell, William Davies, and Vanwart Bros.) were in the top 30 in 1914-15, but the remaining four sold nothing to the army in 1914-15.

The concentration of sugar sales with the Canada Sugar Refining Co. (Redpath's) in 1918/19 was quite likely an effect of sugar shortages at the end of the war. Early in the war, sugar was typically bought with other groceries, never from refiners.²⁵ In 1918/19, 91% of the army's sugar came from 3 refiners (there were 6 refinery companies in the country) (CFB, 1919, p. 54).

We have not yet been able to locate business directories for the war period, so we know little about the characteristics of most firms that supplied the army. For the major cities in Ontario and Quebec, we have begun to use an 1899/1900 Business Directory to check whether the major army suppliers were in business as early as 1900.²⁶ Our matching must be an

²⁴ None of James Lumbers, GH Waller, JA Leaman, Flavelle's, PD Johnston, Abel Turcotte, or Scandrett Bros sold as much as \$10,000 worth of goods to the army in 1918/19.

²⁵ Harris Abattoir and Swift Canadian appear on the list of 51 sugar suppliers in 1914/15, with Harris Abattoir the biggest single supplier.

²⁶ Digitized by Library and Archives Canada, and available online: <http://www.collectionscanada.ca/canadiandirectories/022009-100.01-e.php>.

underestimate of firm survival: we required that the 1899/1900 firm have a very similar name, and be selling / producing items like those sold by the firm in the military records.²⁷ For both 1914/15 and 1918/19, about half of the larger firms (defined as selling \$4,000+ in 1914/15, \$10,000+ in 1918/19) in the relevant cities, can be traced back to 1900. The *CG* described firms of 15 years standing as “long-established,” and for this period of rapid immigration and urban development in central Canada, we agree with this assessment. The army had many suppliers: in Ontario and Quebec, at least, they were typically older (and probably bigger) enterprises.

In 1914/15, while half or more of a particular item may have been supplied by the top 5 supplying firms, these were often wholesale grocers based in one city. Canadian army operations in the first year of the war were highly concentrated in a few places, so this makes sense. In 1918/19, while it was rare for the concentration of supply to approach what we see for sugar, and the share of the army purchases supplied by the top few firms may not have increased much from 1914/15, quite different firm names were near the top of the list. They were much less likely to be wholesale grocers, much more often food producers selling to a number of different military districts.

Across a wide range of food items, we see the army purchasing many more supplies from firms operating in two or more regions. We define any firm selling food in at least two military districts in the same year as a “multi-district supplier.”²⁸ Table 5 shows two ways of thinking about the role of multi-district suppliers. For five food items, we have calculated the percentage

²⁷ So we do not consider an 1899 baker to be a match for a 1918 firm selling fish.

²⁸ We combined observations for 1912-13 and 1913-14, so there are a few cases where a multi-district firm sold to one district in 1912-13 and to another district in 1913-14.

of expenditure on that food, by military district, going to multi-district suppliers. We have also calculated the total number of firms supplying the item to each military district, and how many of these firms were multi-district suppliers. Clearly, where nothing, or everything, was purchased from multi-district suppliers, the two measures are the same. In most cases, they differ, sometimes quite a lot. In Nova Scotia in 1918/19, for example, 8 firms sold beef, but the one multi-district supplier (Harris Abattoir), sold 80% of the beef.²⁹

For four of the five foods shown in Table 5, the role of multi-district suppliers clearly rose steeply by the last year of war. Tea was the one good for which multi-district supply was common even before the war: all tea was imported, and it was a relatively high price per pound item. All along, it was common to have several suppliers of each good. There often were several military barracks / camps in one district, so there were several places to send provisions. Having multiple suppliers for a good may also have been a way of ensuring that some supplies were always being delivered, and it may have been a way of trying to increase support for military presence in the area. Generally, we see the largest numbers of suppliers in Nova Scotia, where we might expect the growth of larger scale retailing and wholesaling to be least advanced.

We noted above that sugar shortages may have pushed the army into heavy reliance on the Canada Sugar Refining Co. in 1918. By the end of the war, supplies of beef and butter were also mainly coming from multi-district suppliers. A multi-district supplier did not necessarily have to charge the same price in different districts, but presumably was under some pressure to do so. We know that the multi-district suppliers were often large firms: an ability to sell at similar prices in different parts of the country is consistent with the existence of economies of

²⁹ Prince Edward Island was part of the Nova Scotia military district.

scale in both total production levels and better distribution networks across the country.

We were somewhat surprised to find an increasing reliance on multi-district suppliers for vegetables.³⁰ This was a low value per pound item, grown by large numbers of farmers in many parts of the country. We did not anticipate that firms present in several areas would have sold vegetables to the army.

The one food where multi-district sellers were conspicuously absent was bread. There were usually several bakeries selling bread to each military district. Even in 1918/19, no bakery sold to more than one district. A number of the bakeries we see supplying the army would, however, be part of the large bread companies (such as the Canada Bread Co.) by the mid-1920s. It seems likely, therefore, that the army was dealing with larger bakeries.

So far, we have treated all multi-district suppliers as equivalent: a firm selling in Toronto and Ottawa is classed the same way as a firm selling in Toronto and Calgary or Vancouver. Table 6 is our first attempt to address the question of whether firms selling in more than one military district were in fact supplying widely separated regions. As the army bought little in 1912-14, there were few suppliers, and many of the suppliers changed between 1912-13 and 1913-14, so the two year total is well above the annual average. Few of the firms supplying food to B.C. also sold goods to any other district, but the few that did were not purely western suppliers. Before the war, suppliers in Ontario and Quebec rarely sold goods in more than one central Canadian district, or in the west. The picture remains virtually the same in 1914-15.

³⁰ We have not (yet) included purchases of specific vegetables, such as carrots or onions or tomatoes. We assume that unspecified “vegetables” sold by the pound were mainly used in stew and soup.

Conditions in 1918-19 were very different. The overall increase in the number of firms selling to the army was partly a result of the increased volume of business. However, there were more specialist suppliers, selling only a few items each (e.g. Robin Hood Mills only sold rolled oats and Welch's only sold jam in British Columbia), and correspondingly less reliance on what we think must have been wholesale grocers providing a variety of items including eggs, soap, salmon, cocoa, soda biscuits, custard powder, bovril, rice, canned pears, lime juice, and rolled wheat.³¹ As the total number of suppliers rose, so did the frequency of inter-regional supply. Over a third of the firms selling goods in B.C. in 1918-19 were also selling to at least one military district in central or eastern Canada. Over a quarter of the firms selling to central Canadian districts were also selling to at least one western district. For most firms, expansion in the number of military districts sold to meant they were selling in both western and central Canada.

Conclusions

Food prices in the west looked a good deal more like food prices in Ontario by 1918 than in 1914 in large part because the same firms were much more often supplying both parts of the country in the latter than in the former year. We do not know if substantial army orders from the west encouraged eastern suppliers to sell more to the western retail sector. The developing role of agents in bringing together western sellers and eastern producers may have been parallel to, but largely independent of, military orders. As we noted above, war-induced labour scarcity and transport difficulties probably encouraged greater reliance on agents. So long as the lower cost

³¹Some of these foods may have been for patients in the infirmary or for the officers' mess.

producers were increasing their share of the western market, the effect on retail and army prices should have been similar even if the mechanisms were different.

The Great War was a major disruption for the Canadian economy, but by the end of the war, larger firms much more often had developed nationwide markets. The extent to which the wartime changes laid the groundwork for what came next we cannot yet say. The 1920s have long been seen as the decade when the distribution sector underwent rapid transformation, and there were many highly visible developments in that decade. Throughout urban Canada, shopping in 1929 was very different from shopping in 1919. But the striking inter-city differences in prices that were the norm in 1913 were largely gone by 1918. The changes in supply patterns we see in the army records may not have been very visible to consumers – they bought flour and tea and bacon and jam every year, and maybe almost every week. A different producer or package may not have mattered much to consumers, and they may not have known whether they decided to buy something because the grocery clerk recommended it or because of newspaper ads. There were so many crises and upheavals to struggle through and sorrow over during the Great War that such trifles could easily have gone without notice. But it looks to us like the trifles added up, and once the new methods tried only because of wartime emergencies turned out to work well they (and as a result prices across the country) became standard pretty quickly.

Table 1: West/East food price gaps, 1900-1923

Canada - Vancouver price / Toronto price					
	1900	1913	1917	1920	1923
Bacon	208	118	95	105	127
Butter	120	114	92	99	103
Flour	148	131	104	94	105
Rice	80	125	83	68	82
Tea	150	158	89	104	92
US - Seattle / Buffalo price					
	1900	1913	1917	1920	1923
Bacon	113	143	115	137	147
Butter	117	108	102	96	97
Flour	71	97	90	93	110
Rice	103	83	96	108	124
Tea	109	111	103	102	110

Note: Canadian prices are for December (prices published monthly in the *Labour Gazette* from 1910). US prices are annual averages for 1913 on (prices published monthly).

Table 2: Rations, Valcartier Camp, 1914

Item	Daily Quantity per Man	Unit
Bread	1.25	lbs.
Meat	1	lb.
Potatoes	1	lb.
Bacon	2	ozs.
Beans	2	ozs.
Jam	2	ozs.
Butter	2	ozs.
White Sugar	2	ozs.
Fresh Vegetables	6	ozs.
Cheese	1	oz.
Split Peas	.5	oz.
Salt	.5	oz.
Pepper	.028	oz.

Source: Duguid (1938), Appendix 103, p. 67.

Table 3: Army Prices by Region, 1912-13 to 1918-19 (cents)

(per pound except where noted)	1912-13 and 1913-14 average			1918-1919		
	Toronto Ontario	Montreal Quebec	Victoria B.C.	Toronto	Montreal	Victoria
Bacon	20.1	18.5	25.7	34.8	34.3	33.4
Beans	4.3	4.2	6.0	10.9	9.3	9.7
Beef	10.5	11.2	11.9	19.1	18.7	18.4
Bread	4.0	3.8	4.9	6.1	5.6	6.1
Butter	28.3	26.8	34.7	47.3	46.3	45.0
Cheese	14.7	14.7	20.0	23.3	22.8	25.6
Eggs (doz.)	38.4			47.6	51.5	59.9
Flour	2.6	2.7		5.5	5.7	4.8
Jam	10.4	10.2	27.5	15.3	15.8	16.9
Milk (gal.)	27.5	40.0	43.0	42.6	40.6	42.6
Potatoes	1.8	1.8	1.8	2.5	2.1	1.7
Sugar	5.2	5.4	6.9	8.6	8.5	9.7
Tea	20.9	21.5	21.2	35.7	36.1	33.8

Average prices paid, weighted by quantities purchased. “Victoria” includes all British Columbia expenditures, “Toronto” all south-central Ontario expenditures, and Montreal, all western Quebec expenditures (this did not include Valcartier Camp).

Table 4: Top 10 Army Food Suppliers, 1914/15 and 1918/19

1914-15			1918-19		
Firm / Main Location	Purchases (\$,000)	Main products	Firm / Main Location	Purchases (\$,000)	Main products
Harris Abattoir / Toronto	231	meats, groceries	Harris Abattoir / Toronto, Halifax, Montreal	2,841	bacon, meats, butter
James Lumbers / Toronto	83	butter, groceries	Matthews-Blackwell / Toronto, Montreal	424	butter, lard, meats, fish
GH Waller / Toronto	71	meats	Swift Canadian / Toronto, Winnipeg, Edmonton, Victoria	307	chicken, eggs, meats
JA Leaman / Halifax (NS)	65	meats	P Burns / Calgary (Alta), Victoria	290	chicken, fish, meats
P Burns / Victoria (BC)	64	meats, butter	Gordon, Ironside & Fares / Regina (Sask), Winnipeg	194	bacon, eggs, meats
Flavelle's / Lindsay (Ont)	51	butter, cheese	Eastern Canada Fisheries / Montreal	152	fish
PD Johnston / Thoburn (BC)	49	groceries	William Davies / Toronto	145	bacon, butter, cheese
Swift Canadian / Edmonton (Alta)	41	meat, groceries, vegetables	Canada Sugar Refining Co / Montreal	144	sugar
Abel Turcotte / Quebec City	38	butter, groceries	Vanwart Bros / St John (NB)	121	meat, vegetables
Scandrett Bros / London (Ont)	35	bacon, butter, groceries	Gunns / Toronto	109	bacon, eggs

Calculated for orders >\$4,000 in 1914/15 and >\$10,000 in 1918/19. Firms in top 10 in both years in **bold**.

Table 5: Goods purchased from multi-district suppliers

	1912-14		1914-15		1918-19	
	% spent on Multi	Multi / N Firms	% spent on Multi	Multi / N Firms	% spent on Multi	Multi / N Firms
BEEF						
Nova Scotia	0	0 / 4	0	0 / 6	80	1 / 8
Western Quebec	60	1 / 2	14	1 / 2	100	2 / 2
South-Central Ontario	36	1 / 5	0	0 / 1	92	3 / 5
Alberta	0	0 / 1			98	3 / 4
British Columbia	0	0 / 6	0	0 / 5	98	2 / 4
BUTTER						
Nova Scotia	0	0 / 5	0	0 / 17	69	2 / 6
Western Quebec	32	1 / 4	10	1 / 3	73	4 / 6
South-Central Ontario	0	0 / 5	0	0 / 5	65	2 / 7
Alberta	0	0 / 3			87	3 / 5
British Columbia	13	1 / 3	0	0 / 6	51	4 / 10
SUGAR						
Nova Scotia	0	0 / 5	0	0 / 13	17	1 / 5
Western Quebec	31	1 / 4	6	1 / 3	100	1 / 1
South-Central Ontario	0	0 / 4	0	0 / 5	100	1 / 1
Alberta	0	0 / 2			73	2 / 5
British Columbia	14	1 / 3	0	0 / 7	95	3 / 5
TEA						
Nova Scotia	5	1 / 6	0	0 / 4	0	0 / 2
Western Quebec	80	2 / 3	100	1 / 1	45	2 / 4
South-Central Ontario	99	2 / 3	77	1 / 4	64	2 / 4
Alberta	100	1 / 1			71	2 / 3
British Columbia	5	1 / 6	0	0 / 6	100	3 / 3

VEGETABLES						
Nova Scotia	0	0 / 4	0	0 / 11	0	0 / 10
Western Quebec	25	1 / 3	19	1 / 2	29	1 / 2
South-Central Ontario	0	0 / 3	0	0 / 4	72	3 / 8
Alberta					100	2 / 2
British Columbia	19	1 / 3	0	0 / 7	55	1 / 5

Notes: A multi-district firm is defined as a firm with sales of food items to more than one military district in the same year (or over two years, in the case of 1912-13 and 1913-14).

“% spent on Multi” – Percentage of purchases for each item going to multi-district firms are based on the dollar amount spent on the item in that military district.

Multi / N Firms – Number of multi-district firms supplying the item / Total number of firms supplying the item

Table 6: The Regional Spread of Army Food Suppliers, 1912-14 to 1918-19

	Firms Supplying Food to British Columbia		
	Total	Multi-district, only in the west	Supplying to at least one province east of Manitoba ^a
1912-1914	19	0 (0 %)	3 (16 %)
1914-1915	16	0 (0 %)	1 (6 %)
1918-1919	124	25 (20 %)	47 (38 %)
	Firms Supplying Food to at least one Ontario or Quebec district		
	Total	Multi-district, in Ontario / Quebec only	Supplying to at least one western province ^b
1912-1914	114	10 (9 %)	4 (4 %)
1914-1915	72	8 (11 %)	5 (7 %)
1918-1919	457	60 (13 %)	134 (29 %)

^a Also supplying at least one Military District in Prairie Provinces

^b May also have been supplying Military Districts in Ontario / Quebec / Maritimes

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